REMARKS/ARGUMENTS

This is in full and timely response to the Office Action dated October 18, 2006. The Examiner is respectfully requested to reconsider and withdraw the rejections made in the last Office Action based on the above amendments and the following remarks.

Amendments

By this Amendment, claim 4 has been cancelled, and claims 1 and 5 to 14 have been amended. Claims 1 to 3 and 5 to 14 remain pending for the Examiner's reconsideration.

Independent claims 1 and 10 have been amended to incorporate additional limitations to further distinguish the Applicants' claimed invention over the prior art of record. Specifically, claims 1 and 10 have been amended in a manner that substantially incorporates the subject matter of original claim 4. As amended, claims 1 and 10 recite, among other things, that the driving circuit functions to perform a high-speed reading operation for selecting pixels at a higher speed than under normal reading operations, and that the high-speed reading operation is used to output a pixel output signal to a pixel defect determining circuit. Support for this claim language is found, for example, in original claim 4 and on page 14, line 20, to page 15, line 3, of the original specification.

Claim 4 has been canceled in favor of the changes to claim 1, and claim 5 has been amended to depend upon claim 1 instead of claim 4. Claims 6 to 9 and 11 to 13 have been amended to be consistent with the changes made to independent claims 1 and 10, respectively.

Support for these changes can be found in the claims themselves. Further, claim 14 has been amended to change "an identical" into --the same-- to clarify that the circuits are all on the same chip. Support for this change is found, for example, on page 18, lines 8 to 16, of the original specification.

Drawings

A separate Letter to the Official Draftsperson is being filed herewith to submit a replacement sheet for Fig. 11 of the drawings. Fig. 11 is corrected to include the legend --Prior Art--, as requested by the Examiner.

Rejection of Claims 1 to 3 and 10 Based on Takayama et al.

Claims 1 to 3 and 10 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Takayama et al. (U.S. Patent No. 6,683,643). The Examiner contends that Takayama et al. discloses all of the features of the claimed invention, and refers specifically to Fig. 14 and columns 10 and 11 of Takayama et al. for a teaching of the claimed features. To the extent that this rejection might still be applied to the claims as amended, it is respectfully traversed for the following reasons.

Takayama et al. discloses an electronic camera capable of detecting a defective pixel each time the power supply is turned on. A pixel defect detecting circuit 43 is provided as part of the signal processing section 41, and a correction circuit 44 is used to replace the image data of the defective pixel using a mean value of the pixels surrounding the defective pixel. Takayama

et al. provides a system that alters the image data in an attempt to cope with aging and temperature changes of the defective pixels of the image pickup element.

Takayama et al. does not provide a pixel defect testing method for use to perform a pixel defect test before shipment of the image pickup device to determine whether the device is defective. Takayama et al. also does not teach or suggest the Applicants' concept of capturing a pixel output signal independently of the output signal processing circuit, nor the concept of using a high-speed reading operation for a pixel defect testing method.

Claim 1, as amended, distinguishes over Takayama et al. by reciting that the driving circuit functions to perform a high-speed reading operation for selecting pixels at a higher speed than under normal reading operations, and that the high-speed reading operation is used to output a pixel output signal to a pixel defect determining circuit for determining pixel defects. This feature of the Applicants' invention reduces the amount test time required prior to shipment, particularly for solid-state image pickup devices having more pixels and higher functionality.

As amended, independent claims 1 and 10 are believed to clearly distinguish the Applicants' invention over the teachings of Takayama et al. Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejections of claims 1 to 3 and 10 as being anticipated by Takayama et al.

Rejection of Claims 4, 5 and 11 Based on Takayama et al. in View of Oda

Claims 4, 5 and 11 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Takayama et al. in view of Oda (U.S. Patent No. 6,340,989). The Examiner

contends that Takayama et al. teaches the claimed invention, except for the driving circuit having a function of performing both a normal reading operation for selecting a pixel at a normal speed and a high-speed reading operation for selecting a pixel at a higher speed than the normal reading operation. The Examiner relies upon Oda for a teaching of this feature.

As explained above, claim 4 has been cancelled and the subject matter thereof incorporated into independent claims 1 and 10. To the extent that this rejection might be applied to amended claims 1 and 10, or to claims 5 and 11, it is respectfully traversed for the following reasons.

Oda discloses a monitoring method with a CCD imaging device to allow a user to monitor a picture being picked up by the CCD. The camera can be operated in a shoot mode in which it reads and records all the pixels, or in a monitor mode in which it reads only part of the pixels. In the monitor mode, the pixels of the imaging device are reduced, or thinned, in the vertical direction. This is sometimes referred to as vertical decimation-in-time signaling provided to the CCD device, which is not related to the Applicants' claimed invention.

The Examiner states on page 5 of the Office Action that Oda teaches a high-speed reading operation (i.e., the "monitor mode"), and that it would have been obvious to include such a high-speed reading operation in Takayama et al. to reduce the delay in normal image capture operations. However, Oda achieves its "high-speed" reading operation by omitting entire lines of pixels in its reading scheme. Such reading operations are completely unsuitable for use in pixel testing where all of the pixels must be read to determine if they are defective. The monitor mode in Oda is not a high-speed reading operation as contemplated by the Applicants' invention

because pixels are not selected at a higher speed; the shorter reading time is achieved by reading fewer pixels.

The Applicants' claimed invention would not have been obvious from the combined teachings of Takayama et al. and Oda. As explained above, neither of these references teach or suggest a high-speed reading operation suitable for determining pixel defects in a solid-state image pickup device as claimed. Further, there is no teaching or suggestion for modifying the device of Takayama et al. based on the disclosure of Oda to include a high-speed reading operation as contemplated by the Applicants' invention.

Accordingly, the Examiner is respectfully requested to reconsider and withdrawn the rejection based on Takayama et al. in view of Oda.

Rejection of Claims 6 to 9, 12 and 13 Based on Takayama et al. in view of Oda and Kidono et al.

Claims 6 to 9, 12 and 13 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Takayama et al. in view of Oda, and further in view of Kidono et al. (U.S. Patent No. 6,970,193). The Examiner contends that Takayama et al. discloses the claimed invention, except for the claimed driving circuit performing a multi-pixel reading operation for selecting more pixels than under a normal reading operation. The Examiner relies upon Kidono et al. for a teaching of this feature.

Claims 6 to 9, 12 and 13 all depend, directly or indirectly, upon independent claims 1 and 10, which are believed to be allowable for the reasons stated above. Accordingly, this rejection is respectfully traversed for at least the reason that claims 6 to 9, 12 and 13 depend upon

allowable base claims. These claims are also believed to be allowable for the additional subject matter recited therein.

Rejection of Claim 14 Based on Takayama et al.

Claim 14 stands rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Takayama et al. The Examiner contends that Takayama et al. discloses the claimed invention, except for the claimed predetermined test signal being input to other circuits on the chip in parallel with a defect test on the pixel unit. The Examiner relies upon "Official Notice" that it would have been obvious and well-known to include this claimed feature in the Takayama et al. device. To the extent that this rejection might still be applied, it is respectfully traversed for the following reasons.

First, it is respectfully submitted that the Examiner cannot take Official Notice that it would have been obvious to modify the teachings of Takayama et al. in the manner claimed. Official Notice is only appropriate for factual assertions where the facts so noticed are of notorious character and serve only to "fill in the gaps" in an insubstantial manner. In re Ahlert, 424 F.2d 1088, 1092, 165 USPQ 418, 420 (CCPA 1970); In re Zurko, 258 F.3d 1379, 1385, 59 USPQ.2d 1693, 1697 (Fed. Cir. 2001). Official Notice is not appropriate for legal conclusions, such as obviousness.

Second, it is respectfully submitted that the officially noticed "fact" (or in this case legal conclusion) is not common knowledge or well-known in the art. The Examiner is requested to

provide documentary evidence of the Officially Noticed fact in the next Office action if this rejection is to be maintained.

Finally, it is respectfully submitted that it would not have been obvious to input a predetermined test signal to other circuits mounted on the same chip in Takayama et al. to perform a defect test on such other circuits in parallel with a defect test on the pixel unit. Takayama et al. does not have a means for keeping the signals from the pixel unit separate from the other signal processing circuits during the pixel defect test, nor does Takayama et al. teach or suggest the claimed parallel testing of other circuits on the chip. As such, it would not have been obvious to modify Takayama et al. in a manner that would result in the Applicants' claimed invention.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of claim 14 based on Takayama et al.

Conclusion

For at least these reasons, it is respectfully submitted that the Applicants' claimed invention, as presented in the amended claims herein, is not anticipated by or obvious in view of the prior art references applied by the Examiner. Accordingly, the Applicants respectfully submit that all of the pending claims 1 to 3 and 5 to 14 are now in condition for allowance, and request that a timely Notice of Allowance be issued for this application.

If the Examiner has any comments or suggestions that could place this application into even better form, the Examiner is encouraged to contact the Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted by:

Dated: **January 12, 2007**

Ronald P. Kananen
Registration No. 24,104

RADER, FISHMAN & GRAUER, P.L.L.C.
1233 20th Street, N.W., Suite 501
Washington, D.C. 20036
Telephone: 202-955-3750
Facsimile: 202-955-3751
Customer No. 23353

FIG. 11
(PRIOR ART)